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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,613	12/14/2001	Ryuzo Ueno	OHS-311	3723

7590 10/24/2003

Sherman & Shalloway
413 North Washington Street
Alexandria, VA 22314

EXAMINER

SADULA, JENNIFER R

ART UNIT	PAPER NUMBER
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1756

8

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,613

Applicant(s)

UENO ET AL

Examiner

Jennifer R. Sadula

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

The following Office Action is a complete response to the amendment and arguments filed 10/3/03.

Response to Amendment

The amendments to the claims have overcome all rejections based upon second paragraph of 35 U.S.C. 112.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al, U.S. Patent No. 5,124,477 ("Suzuki").

Suzuki teaches a process for preparing PHBA (para-hydroxybenzoic acid) for use in liquid crystal polyester materials (LCP) by reacting an alkali salt of phenol with carbon dioxide via the Kolbe-Schmitt process wherein salicylic acid is generated. Via the teaching of Suzuki, potassium salts are preferred. Thus potassium phenolate and potassium salicylates are utilized (3:63-4:9). The amount of the compound of formula I and/or formula II that is contained in the reaction system is specified in column 6, lines 26-37 wherein the amounts are specified in terms of the salts utilized and fall within the specified ranges of applicants claim 1.

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Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Samuels et al, U.S. Patent No. 5,977,405 ("Samuels").

Samuels teaches preparation of aromatic hydroxycarboxylic acids and dialkali metal salts wherein p-hydroxybenzoic acid (a salicylic acid PHBA) is utilized as a monomer in making polyesters. The alkali metal aryloxides are usually prepared via the reaction of an aryl hydroxy compound such as phenol and an alkali metal containing base, such as sodium or potassium hydroxide (1:15-28). Again, the Kolbe-Schmitt process is utilized. Table 1 shows the usage of HIP and Salicylic acid in relation to the salts utilized.

Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanimoto et al, U.S. Patent No. 4,731,475 ("Tanimoto").

Tanimoto teaches a method of making PHBA (para-hydroxybenzoic acid) by preparing p-disodium hydroxybenzoate to a disodium process with a secondary production of salicylic acid (1:10-24). Powdered sodium carbonate may be used within the range of from 5 to 50% by weight in terms of phenol in a solution (2:3-14). P-disodium hydroxybenzoate and sodium chloride in the presence of a transition metal powder are utilized as specified in the examples and abstract. Via the teaching of Tanimoto, sodium salts are preferred.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki or Samuels as applied above, each in view of Furuta et al., U.S. Patent No 5,891,532, ("Furuta").

Suzuki teaches a process for preparing PHBA (para-hydroxybenzoic acid) for use in liquid crystal polyester materials (LCP) by reacting an alkali salt of phenol with carbon dioxide via the Kolbe-Schmitt process wherein salicylic acid is generated. Samuels teaches preparation of aromatic hydroxycarboxylic acids and dialkali metal salts wherein p-hydroxybenzoic acid (a salicylic acid PHBA) is utilized as a monomer in making polyesters. The alkali metal aryloxides are usually prepared via the reaction of an aryl hydroxy compound such as phenol and an alkali metal containing base, such as sodium or potassium hydroxide (1:15-28). Again, the Kolbe-Schmitt process is utilized.

Neither Samuels nor Suzuki teaches the LCP resin the materials made are utilized in, only to say that each is for use in LCP resins.

Furuta teaches a LCP as specified in claim 5 wherein recurring units I, II and III are shown in columns 4-7 wherein it is taught that preferred combinations include polyesters from groups I and II which are as shown by applicants.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the polyesters of Samuels or Suzuki and utilize them in the resin co-polyesters of Furuta as both Suzuki and Samuels teach the materials made by the Kolbe-Schmitt process to be for use in any LCP resin material.

Response to Arguments

Applicant's arguments filed 10/3/2003 have been fully considered but they are not persuasive. With regard to the claim objections, Examiner notes that the claims are now limited by inclusion of the alkali metal component. With regard to the references the Applicants argue certain well-known reactions capable of forming the intended LCP. Examiner notes these reactions to fail to be the sole means for production of the intended LCP materials. Applicants further argue on page 5, "In stark contrast, the presently claimed LCP composition specifically states that HIP and/or salicylic acid are present in at least 1 to 500 mmol% and an alkali metal content is present from 10 to 5,000 ppm." Examiner disagrees with this interpretation of the claim language.

Specifically, Applicants claim 1 is drawn toward a LCP resin comprising 1 to 500 mmol% (based on the total mmol% of all recurring units) of a recurring unit derived from such materials as HIP and salicylic acid (emphasis added). No specific recitation is made as to the presence of HIP and/or salicylic acid.

Turning to Applicants' specific arguments with regard to the teaching references, Examiner notes that Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Examiner acquiesces to Applicants assertions as to the enablement clause (federal circuit rulings) and the requirements of anticipation, however Examiner notes that Applicants' mere assertion that the references don't teach the claimed composition need be backed up by specific reasoning as to why the references do not teach such limitations.

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Applicants further assert, “nowhere do Suzuki et al. teach any of the recited limitations as to a HIP or salicylic acid content”. Once again Examiner notes in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the presence of HIP or salicylic acid) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regard to Samuels, Applicants once again argue, “nowhere do Samuels et al. teach any of the recited limitations as to a HIP or salicylic acid content”. As noted above the content of these impurities is not a limitation in the claims, but rather a derivative of these materials is. Applicants further confuse the issues on page 12 by stating that although Samuels does teach HIP ranges, Samuels must also teach, “1 to 500 mmol% of a recurring unit derived from salicylic acid as a constituent based on the total of all the recurring units”. This argument is also not supported by the limitations of the claims.

Lastly, with regard to Tanimoto, Applicants once again argue “nowhere do Tanimoto et al. teach any of the recited limitations as to a HIP or salicylic acid content” and as noted above this argument is not supported by any of the limitations of the claims.

With regard to the combination of references for claims 4-5, the Applicants are relying on the references to be required to teach limitations as to a HIP or salicylic acid content. Examiner did not and does not rely on these references to teach limitations which do not exist in the claims. Examiner relies upon these teachings for the purposes of the LCP resin the materials made are utilized in. As stated above it remains the Examiner's assertion that the primary references teach

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the limitations as claimed and the secondary references provide for the final compositional materials.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

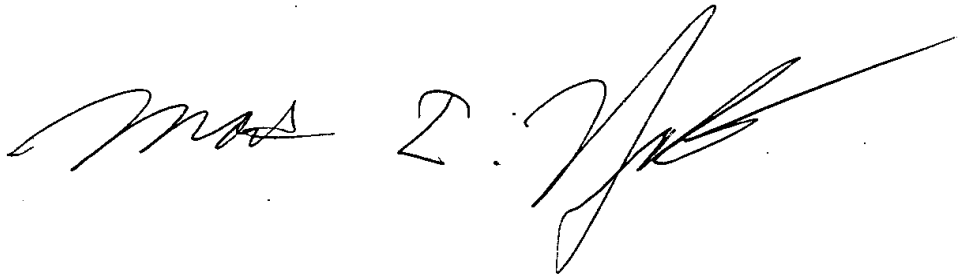
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer R. Sadula whose telephone number is 703.305.4835. The examiner can normally be reached on Monday through Friday, 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 703.308.2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9310 for regular communications and 703.872.9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.

A handwritten signature in black ink, appearing to read "Mark F. Huff", with a long, sweeping horizontal line extending to the right.

MARK F. HUFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

JRS
October 20, 2003